DOCUMENT RESUME

ED 058 037 SE 012 715

TITLE	Scientists and Engineers in the Federal Personnel System.
INSTITUTION	Civil Service Commission, Washington, D.C. Bureau of Policies and Standards.
PUB DATE	Dec 70
NOTE	25p.
AVAILABLE FROM	Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 ($0.40)
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	Employment Practices; *Engineers; Federal Government; *Government Employees; Government Publications; *Personnel Management; Promotion (Occupational); Recruitment; Scientific Personnel; *Scientists

ABSTRACT

This pamphlet is designed to help science and engineering managers in Government laboratories understand the relevant features and flexibilities of the Federal personnel system. The various sections deal with staff recruitment procedures, academic qualifications for each entering grade, short term appointments, the Federal pay system, position classification, employee training, promotion and incentives, and other conditions of service. (MM)

EDO 58037

scientists and engineers in the federal personnel system

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BUREAU OF POLICIES AND STANDARDS
UNITED STATES CIVIL SERVICE COMMISSION

To the Federal Scientist and Engineer:

Many of the most creative and talented Americans of our time are working in Government laboratories. Here they must be both scientists and public servants. Neither role diminishes or compromises the other; indeed, it is because these two roles are so complementary that our Government laboratories can continue to attract men and women of the highest quality.

The Civil Service Commission and the heads of the employing agencies are exerting every effort to insure that Government research and development programs are staffed by such people. The Federal personnel system can make its full contribution to this effort, however, only if the special features and flexibilities of the system are widely understood and fully exploited.

This pamphlet is an attempt to make sure that such understanding is widespread in the Federal scientific and technical community. Many managers who read it may well find they have a freer hand in personnel management than they supposed.

We urge you to seek the advice and assistance of your personnel officer, and that of his staff specialists, on how best to use these flexibilities in meeting your own particular needs.

United States Civil Service Commission

December 1970

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402 - Price 40 cents

the special features

of the

federal personnel system

of interest to the scientist and engineer

staffing for effective performance

A primary objective of Federal personnel administration is to enable managers to carry out their missions and programs effectively. Therefore, the personnel function must operate as a part of the total management function rather than as an end in itself. To insure that this relationship exists, agency heads are responsible for determining the pattern of organization for personnel management most suited to the needs of the agency. The Commission urges agency heads to delegate their personnel management authorities to subordinate management officials as near the work levels as possible.

Most Federal departments and agencies operate under the civil service merit system, which emphasizes the following principles:

- Wide publicity for employment opportunities.
- Equal consideration of all qualified applicants.
- Qualification standards related to the work to be done.
- Selection from among the best qualified.

Many features of the Federal personnel system apply equally to all agencies and to the many diverse occupational groups, from clerical to professional, found in the Federal service. Generally, however, there is enough discretion within the broad framework of statute and regulation to allow agencies to develop personnel programs to meet the needs of special groups such as scientists and engineers.

To insure sound planning before recruitment is started, managers should determine the staffing pattern that promises full achievement of the mission or project to be undertaken. This staffing pattern should include forecasts of the numbers of employees needed, the qualifications they must have, and the expected duration of their assignments. Once this advance planning is completed, active recruitment can begin.

a variety of recruitment procedures

The Federal manager has many methods to choose from in deciding how to fill a specific vacancy. Ordinarily, when well-qualified candidates are available within his department or agency, he may decide to fill the job by promotion or by reassignment. If well-qualified candidates are available elsewhere, however, he may decide to hire an employee from some other Federal department or agency, rehire a former Federal employee, or recruit someone who has not previously worked for the Government.

If the decision is to recruit someone from outside the agency, the following methods and tools are available for use by Federal managers:

- *The Area Office System.* Applicants file with CSC area offices (formerly interagency boards) that are designated to maintain lists of eligibles for engineering and scientific positions. These area offices then serve as a central source of qualified applicants for Federal agencies. By informing other area offices of shortages that may develop the area office network can refer applications anywhere in the system where a need develops.

In order to provide an open-competitive vehicle for processing applications, examination announcements are no longer issued for specific occupations, such as chemist, or mathematician. Most examination announcements now cover a broad range of occupations and are open for receipt of applications on a continuous basis. Agency recruiters would be wise to check with the appropriate area office to determine if qualified applicants are available before initiating new recruiting efforts when a vacancy develops, or staff increases are anticipated.

- *Selective Certification.* A technique called "selective certification" may be used whereby only those candidates who meet the particular requirements of a specific position are referred to the agency. For example, this technique may be used to fill positions where experience in two or more fields is desired or where experience in a specific subspecialty of a field is desired.

To insure an input of high-quality applicants into the examination process, a well-planned and vigorous recruiting drive is necessary. The following "tools of the trade" will help:

- *Advertising Vacancies.* Paid advertisements may be used to publicize vacancies in shortage category positions. Such advertisements may be placed in any publication including professional and trade journals, college newspapers, and general circulation newspapers, which the agency considers appropriate.

- *Using Various Employment Services.* In addition to the State employment services, agencies may use nonprofit professionally sponsored employment services to recruit for professional scientific or engineering positions without the prior approval of the Civil Service Commission. In using these services, each agency must pay the employment service any fees charged for placement. Agencies may not use an employment service that discriminates because of race, color, religion, sex, or national origin.

● *Hiring On-the-Spot.* Federal officials sometimes complain that industry makes immediate offers to good candidates while the Government may take weeks. Actually, agency recruiters, in cooperation with the Civil Service Commission, can arrange to make on-the-spot offers to candidates for scientific and engineering positions using one of the three plans described below.

PLAN A	Agency agrees to appoint all qualified candidates including those certified by the Commission. Competitors may be rated eligible or ineligible. Numerical ratings are not required. If it becomes impossible to appoint all eligibles under consideration, selection must be made in accordance with veterans preference.
PLAN B	Agency is unable to appoint all qualified candidates. All qualified candidates are given numerical ratings. Appointing officer may appoint any candidate with an eligible rating without immediate regard to order on the register. The register must be reconstituted at least once a month to insure compliance with the "rule of three" and veterans preference.
PLAN C	Civil Service Commission has determined that candidates are in critically short supply. Each position concerned is common to two or more Federal agencies. Agencies may appoint any qualified candidate without either a prior commitment to hire all eligibles as in Plan A, or a periodic reconstitution of registers as in Plan B.

Other approaches are available for hiring on-the-spot. For example, in recent years the Commission has made increasing use of what has become known as the "quality approach" to direct recruiting. The quality approach recognizes that in practically all occupations there is a shortage of the best qualified eligibles.

By determining in advance what the shortage level is for a particular occupation, it is possible for an examining office to authorize agencies to hire on-the-spot for career-conditional appointment any eligible whose rating is above the predetermined level. In some cases when there is an examination open, an agency representative may be authorized to recruit, test, and hire candidates whose ratings are sufficiently high to place them in the best qualified group.

- *Making Offers Early.* Offers of appointment may be made to prospective college graduates well in advance of graduation. Security clearances and necessary paper work can then be completed while the individual selected is still in school.

- *Paying Travel Expenses to First Post of Duty.* In filling shortage category positions, as listed by the Civil Service Commission, agencies may pay the travel and moving costs of new appointees and of student trainees promoted to a higher grade upon completion of college work.

- *Appointing Without Examination.* Appointments to certain high-level "Public Law" positions may be made without competitive examination. However, the qualifications of individuals selected for such positions must be approved by the Civil Service Commission. In addition, the Civil Service Commission may authorize, in exceptional cases, appointment to other positions in the competitive service without examination. Such authority may be granted when qualified persons are so few, or the salary or duties are such, that it would not be in the interest of good administration to fill the vacancy by the normal open-competitive process.

- *Utilizing the Executive Assignment System.* Virtually all Federal employees at grades GS–15 and above or equivalent, including scientists and engineers, are registered in the Civil Service Commission's executive inventory. Generally when a vacancy occurs in a career position in one of the top three grades, this inventory is searched for possible candidates. The system assures that executive-level career scientists are considered on a governmentwide basis for advancement.

superior academic achievement

AS AN UNDERGRADUATE

For scientific and engineering positions which do not require prior experience, candidates who have earned a Bachelor's degree and who meet any one of the criteria of *superior academic achievement* can qualify for Grade GS–7. The table below provides these criteria.

Grade	Degree	Criteria
GS–7	BACHELOR'S	Upper third of his class; or "B" (2.90) grade average or better; or "B+" (3.5) grade average or better in appropriate major field; or Elected to Phi Beta Kappa, Sigma Xi, or a national honorary subject-matter scholastic society; or Scored 600 or better on an Advanced Test in the Graduate Record Examinations. *Note:* The grade averages may be based on completed courses at the time of application, or on the last two years of the undergraduate curriculum.

IN GRADUATE SCHOOL

Candidates for scientific and engineering positions who have completed all requirements for a Master's degree can qualify for grades GS–9 or GS–11. Those who have completed all requirements for a Doctoral (e.g., Ph. D.) degree can qualify for grades GS–11 or GS–12. Eligibility varies with the kind of position. Below are the criteria for each grade, and for the higher grades, the kinds of positions which may be filled by candidates with appropriate qualifications.

Grade	Degree	Criteria
GS–9	MASTER'S	Has completed all requirements for a Master's degree, based on one or two years of full-time graduate education.
GS–11	MASTER'S	Has completed all requirements for a Master's degree, based on at least two years of full-time graduate education. Positions involve research, creativity, or advanced scientific work for which the usual preparation is graduate study.
GS–11	DOCTOR'S	Has completed all requirements for a Doctoral (e.g., Ph. D.) degree.
GS–12	DOCTOR'S	Has completed all requirements for a Doctoral (e.g., Ph. D.) degree. Positions involve research or exploratory development of a creative or advanced scientific nature for which the usual preparation is graduate study at the Doctoral level.

EXTRA CREDIT FOR CREATIVE RESEARCH OR DEVELOPMENT

Candidates for professional research and development positions at any level who have made a *significant creative research or development contribution* can qualify for one additional grade above the one for which their experience and training would otherwise qualify them. However, a candidate who qualifies for a particular grade on the basis of graduate education cannot qualify for an additional higher grade based on a significant creative contribution.

some appointment options for meeting project needs

For scientific projects of limited duration (four years or less), career types of staffing may not be appropriate. In such cases the Commission's regulations provide for two types of appointments, in addition to the usual temporary appointments:

TERM APPOINTMENT

A "term appointment" is a temporary appointment used to meet "project" requirements. Such appointments may be made where the employment on a project will be for more than one year but less than four years. In some instances this authority may be useful in appointing visiting scientists, engineers, and college faculty members. Characteristics of this appointment include:

- Prior Civil Service Commission authorization is required.
- Appointment outside the register may be made in the absence of adequate registers.
- Appointment from a register does not confer competitive status.
- Appointees are eligible for within-grade increases in salary.

- Appointees are entitled to annual and sick leave benefits.
- Group Life Insurance and Health Benefits are available, if desired.
- Civil Service Retirement is not afforded.
- Reassignments and promotions within a project are authorized.
- First year of service is a trial period.
- After completion of the trial period, appointees are covered by the reduction-in-force regulations until termination of the "project" and have the same protections against adverse action as career employees.

ONE YEAR APPOINTMENT

A "one-year appointment" is a temporary appointment, not to exceed one year, of college faculty members to positions of a scientific, professional, analytical, employee development, or instructional nature. Characteristics of this appointment include:

- Civil Service Commission approval is not required.
- Appointments may be made without regard to registers.
- Appointees are entitled to annual and sick leave benefits.
- Group Life Insurance, Health Benefits, and Civil Service Retirement benefits are not afforded.
- Reassignments, promotions, and transfers are not authorized.
- Trial period is not required.

In addition to enabling agencies to meet temporary staffing needs, the appointments described above may, by providing concrete experience in Government activities, encourage well-qualified persons to consider career-type appointments.

the federal pay system

Since 1962 the Federal service has had a modernized pay policy and pay system. Its most important feature is a basic policy for determining pay levels:

THE POLICY

> *"Federal Salary Rates Shall Be Comparable With Private Enterprise Salary Rates for the Same Levels of Work."*

Each year the Bureau of Labor Statistics makes a survey of salary rates in private enterprise for many jobs that are the same in Government and industry. Included in the survey are jobs in chemistry and engineering, from junior levels to the levels of research leadership and program supervision. The survey yields national average salaries that are directly comparable with Federal salaries in the scale up to and including GS–15. On the basis of these comparisons, the President submits to Congress any salary recommendations he feels are justified.

THE PAY SYSTEM

Several special features help the Federal service compete in the labor market and stimulate high-quality performance:

- *Recognizing the Quality of Performance.* Two related steps give the manager additional control over the pay of staff members:
  - An extra within-grade increase, in addition to the regular one, can be awarded from time to time for high-quality performance.
  - The regular within-grade increase may be given only if the employee's performance is of an acceptable level of competence; thus the marginal worker can no longer qualify for such an increase.

- *Special Salary Rates.* Authority to increase salary rates for shortage category jobs allows the Commission to raise the entire range of rates within the grade when necessary to meet private-enterprise salaries in shortage occupations. Such increases may be authorized on a nationwide, regional, or locality basis. They are subject to review once a year. This authority has been widely used for professional engineering, scientific, and medical positions.

- *Special Recruitment Salary Rates for Individuals With Superior Qualifications.* For positions in grade GS–11 and above, the Commission has authority to give consideration to an individual candidate's existing salary, unusually high or unique qualifications, or a special need of the Government for his services, and to permit his appointment at a rate above the minimum rate of the appropriate grade. One major use of this authority is to recruit persons with doctorates.

- *Promotion Increases.* The minimum amount of additional salary an employee receives upon promotion is the equivalent of two within-grade increases. (Where there is no scheduled rate in the higher grade which is at least two steps above the previous rate, the employee receives the maximum salary for the grade or keeps his existing rate, whichever is higher.)

- *Structural Features.* The internal structure of the General Schedule has been improved significantly. For example, it now provides for:

  - Regular and meaningful salary differences between grades.
  - Uniform and meaningful rate ranges at most grades. (For grades up to GS–15, ranges are about 30% of the minimum rate of the grade.)
  - Uniform and meaningful within-grade increases, with nine increases available at most grades, each amounting to about 3.3 percent of the entry rate.

- *Absence of Numerical Restrictions on Top Grades for Certain Occupations.* Professional engineering positions primarily concerned with research and development and professional positions in the physical and natural sciences and medicine are not subject to the numerical limitations covering positions at GS–16, 17, and 18. Thus agencies may recommend to the Commission as many such positions in these grades as duties and responsibilities warrant.

relationship of position classification to quality staffing

A close relationship must exist between the function of classifying a position and the function of filling it with a well-qualified person. In recent years the Commission and the agencies have made much progress in bringing these two vital functions into a harmonious relationship. The following tools and techniques for relating the job and the man are available to enhance the development of a high-quality staff:

IMPACT OF THE MAN

Federal jobs are classified on a basis of duties, responsibilities, and qualifications required. The system recognizes, particularly in R&D and many other professional positions, that the qualifications and abilities of an outstanding incumbent will attract greater responsibilities to him to the point where a higher grade may be justified. Some classification standards make specific reference to this factor and provide specific guidance for its consideration; the lack of such reference in a standard, however, does not mean that it is not present.

TWO TRACK SYSTEM

Positions may be classified at the higher grade levels, without requiring supervisory or administrative responsibilities, on the basis of individual research effort and required professional qualifications. Thus, the junior scientist can choose the "track" most suited to his talents, whether as an individual researcher or as a scientific administrator, and prepare himself accordingly.

TAILORING JOBS—NOT MEN

Almost all research positions and, in some cases, other types of positions can be tailored to the qualifications of candidates. For example, if an outstanding candidate is over-qualified for a given vacancy the agency can, after determining the level for which the candidate is qualified, either establish a new position at that grade level or, if possible, expand the duties and responsibilities of the vacant position so that it is classifiable at that grade level.

INTERDISCIPLINARY POSITIONS

Interdisciplinary positions are positions which involve work in two or more professional fields and which may be filled by persons qualified in any of the pertinent disciplines. A vacant interdisciplinary position may, without rewriting the position description, be reclassified to the occupational series fitting the qualifications of a particular candidate.

MOBILITY BETWEEN DISCIPLINES

The Commission has modified the basic education requirements for professional scientific and engineering positions so that employees may move easily from one subject matter emphasis to another in their jobs.

A panel of professionally qualified examiners may exercise professional knowledge and judgment in evaluating the qualifications of scientists and engineers whose completed education does not fully satisfy specified course requirements, but whose experience and education clearly demonstrate possession of the knowledges and abilities required for professional work in a given occupation.

relationship of position classification to personnel details and organizational patterns

DETAILS

The classification and qualification system allows management to "detail" an employee from his current job to another one of higher or lower grade or laterally to one for which he does not meet the regular requirements.

Details may be made for periods of up to 120 days without Commission approval or for longer periods with the approval of the Commission. They are useful for making emergency assignments and they are particularly valuable in training and developing employees. For example:

- An employee may be detailed to another type of position or another agency for the purpose of cross training.
- An employee may be detailed to a higher level position for the purpose of developing and reinforcing higher skills or for determining ability to perform at that level.
- An employee may be detailed to an understudy type position.

Details of the latter two types should be made in accordance with the agency's merit promotion program. If the individual selected for the detail performs according to expectations, he may then be promoted to the position without again invoking the procedures of the merit promotion program.

ORGANIZATIONAL PATTERNS

The classification system does not control the type of organizational pattern, the numbers of employees to be used, or the shape of individual positions. These are all completely under management's control, within mission and budget limitations. Thus, the manager may decide to have a "flat" or a "narrow" form of organization, and to divide the work among many specialists or to use a generalist approach. The classification system is neutral towards these decisions and stands ready to reflect whatever job structure management designs.

Congress has made the Commission responsible for insuring that the numerical limitation imposed on non-scientific and non-research and development engineering positions in grades GS–16, 17, and 18 are not exceeded. Other than this the Commission does not control the total number of positions, or the number of positions at any particular grade level, established in an agency. This is a responsibility of management, for only the agency management has the broad authority to determine how work is to be organized and what duties and responsibilities are to be assigned to any given employee.

In addition, the Commission, in delegating authority for personnel administration, does not normally specify the level to which agency heads must or may redelegate this authority, nor does the Commission prescribe an agency's organization for personnel administration. Although the Commission urges, at every opportunity, the redelegation of authority to levels as close to the work level as possible, agency officials are free to redelegate as much or as little of their authority as they feel is necessary or appropriate to the successful accomplishment of agency objectives.

As enunciated by the Commission, areas of discretionary action are broad at the national level. Sometimes, however, they appear narrow at the laboratory level. The Commission urges agency officials to demonstrate their confidence in laboratory managers, and to have an administrative pattern that is effective enough to carry these areas of discretion through for application at the laboratory level.

training for excellence

A law passed in 1958 was a landmark in the Government's pursuit of excellence. Its many flexible provisions are especially suitable for meeting the need of Federal research and engineering activities to keep professional and technical staff abreast of rapidly changing developments. Thus, laboratories can build in training as a part of the regular careers of their professionals.

THE TRAINING LAW AUTHORIZES

- Employee training at full pay within the agency or at outside facilities.
- Training at colleges, universities, professional institutes, industrial laboratories, or research foundations.
- Payment for all or part of tuition and related costs.
- Acceptance by employees of contributions and awards incident to training in non-Government facilities.
- Payment of travel expenses and registration fees for attendance at professional meetings.
- Cooperation among agencies in opening up training courses across agency lines.

THE LAW HAS CERTAIN RESTRICTIONS BUT ALSO PROVIDES FOR APPROPRIATE WAIVERS

- Employees must have at least one year of civilian service before training at a non-Government facility can be authorized. [HOWEVER, IF THE AGENCY HEAD FINDS THAT POSTPONEMENT OF THE TRAINING IS CONTRARY TO THE PUBLIC INTEREST, HE MAY WAIVE THIS RESTRICTION.]
- Employees may receive only one year of training in a non-Government facility during any 10-year period of service. [HOWEVER, THIS RESTRICTION MAY BE WAIVED BY THE CIVIL SERVICE COMMISSION AT THE REQUEST OF THE HEAD OF THE AGENCY.]
- University training may not be undertaken for the *sole* purpose of obtaining a degree. [HOWEVER, IF THE TRAINING IS FOR THE PURPOSE OF DEVELOPING SKILLS, KNOWLEDGES, AND ABILITIES WHICH WILL BETTER QUALIFY AN EMPLOYEE FOR THE PERFORMANCE OF OFFICIAL DUTIES, AND THE DEGREE IS ATTAINED IN THE PROCESS OF RECEIVING SUCH TRAINING, THE DEGREE IS AN INCIDENTAL BY-PRODUCT OF THE TRAINING, RATHER THAN ITS SOLE PURPOSE.]

A number of agencies have sent staff members to universities for full-time training for periods of up to one year. In addition, several laboratories have worked out arrangements with nearby universities under which senior staff members of the laboratory serve as part-time faculty members and give graduate courses to their junior colleagues, often using projects of the laboratory as course or thesis subjects.

Training on the job continues to be the most important and economical method of training large numbers of people in the skills and knowledges required in our complex civilization. This type of training has proved its effectiveness regardless of level and kind of work. It should not be neglected in favor of academic training.

The Commission has authorized a variety of techniques which agencies are encouraged to utilize.

TRAINING AGREEMENTS

Agencies may enter into special agreements with the Civil Service Commission which provide that satisfactory completion of a special course of in-service training qualifies a participant for reassignment or promotion to a specific job.

For example, an agreement may be effected which provides for a promotion after satisfactory completion of six months training to a position for which the individual would not otherwise qualify.

Training programs of this type may be used to bring performance levels of professionals recruited at GS–5 and GS–7 to the GS–7 and GS–9 levels quickly.

EXECUTIVE DEVELOPMENT AGREEMENTS

Agencies may enter into special executive development agreements with the Civil Service Commission which authorize the movement of individuals from professional, scientific, and technical fields to administrative fields in order to prepare them for supervisory assignments in their professional fields.

The agency must show that, within a reasonable time after assignment to the positions covered, employees will acquire the knowledges necessary to perform fully their new duties.

Under such an agreement, agencies can make these movements of personnel without the prior approval of the Commission. If no such agreement has been made, such movement can be accomplished only with the prior approval of the Civil Service Commission.

CO-OP TRAINING PROGRAMS

These are long-range programs designed to attract quality personnel to full-time Federal employment upon attainment of their degrees. A program is usually arranged so that the student alternates about six months of academic training at an accredited college or university with six months of work experience in the Government agency.

recognizing achievement

Two ways in which the personnel system recognizes achievement have already been outlined: quality increases within the grade and impact of an outstanding staff member on his assignment. Some important additional methods follow:

MERIT PROMOTION PROGRAM

Under guidelines published by the Commission, each agency develops a promotion program to insure that broad areas of consideration are used and that selections are made from among the best qualified when vacancies are to be filled by promotion. (As indicated earlier, management may fill vacancies by methods other than promotion.) By promoting the best qualified, management recognizes achievement and sets the tone of the entire enterprise. To insure valid judgments, some Federal agencies convene panels of senior colleagues so that professionals are rated for promotion by persons who are expert in the area concerned.

INCENTIVE AWARDS

Agency heads are authorized to grant cash awards or honorary awards, or a combination of both, to employees for achievements that improve operations or are in the public interest. These are important vehicles for recognizing high quality performance, particularly when quality increases would not be appropriate. Cash awards of up to $25,000 and honorary awards ranging from an official commendation up to the "President's Award for Distinguished Federal Civilian Service" have been granted to scientists and engineers. For example, 22 of the 31 largest cash awards—ranging from $5,000 to $25,000—were made for scientific and technical achievements; and 19 of the 53 Presidential Awards for Distinguished Federal Civilian Service have been awarded to Federal scientists.

For outstanding R&D achievement some Federal agencies have established special medals or awards named for distinguished scientists who served the agency in the past. For example, the Office of Naval Research has established an annual Navy-wide science award known as the Captain Robert Dexter Conrad Award for Scientific Achievement. This award was named in honor of the first head of the Planning Division of ONR, who was the primary architect of the Navy's basic research program. The Naval Research Laboratory annually grants the E. O. Hulburt Award to a NRL scientist or engineer for a scientific accomplishment of significant value to the Navy. This award was named in honor of the Laboratory's first Director of Research. The Bureau of Standards annually awards the Stratton Award to a Bureau scientist or engineer for an unusually significant contribution to some area of science or engineering. This award was named in honor of the Bureau's first director.

Name awards have also been established by some laboratories for the best technical paper-of-the-year published by a staff member. For example, Cambridge Research Laboratories has established the Dr. Marcus D. O'Day Award. The Air Force Navigation and Guidance Laboratory has established the Samuel M. Burka Award.

There is room for considerable ingenuity in establishing award programs for special purposes. The Commission's pamphlet *Awards and Honors for Scientists and Engineers* provides further information on this subject.

PERFORMANCE RATING PLANS

The Commission may approve a wide variety of rating plans for use within the agencies. Except for certain broad principles, there is no requirement for uniformity between agencies nor between occupations or components within the same agency. Thus, agencies are encouraged to develop performance rating plans tailored to the specific environment in which they will be used.

A well-conceived, conscientiously administered performance rating plan can assist in the identification of the type of training or higher education needed by an individual to work at his maximum capacity. It can also assist in the identification and recognition of staff members who have made important scientific and technical contributions. However, because of the recognition possible under the incentive awards program, it is perhaps true that the "Outstanding" rating is little used today.

Regardless of how individuals or groups are recognized for their achievements, administrators must realize that, to be effective and meaningful, recognition must be reserved for real contributions.

encouraging a creative environment

This, then, is the Federal personnel system as it applies to scientists and engineers in most departments and agencies--a group of principles, policies, and procedures within which laboratory directors can shape the particular environment they seek for their staffs in the light of the missions and goals assigned to the organization.

The development of an environment to foster high productivity and innovation is a large subject, beyond the scope of this pamphlet, and one abounding in subtleties that go far beyond adequate salary rates or generous vacation time. But many personnel factors, as well as other management factors such as the extent to which authority is delegated to the laboratory director, undoubtedly enter into this challenging and complex subject.

Some factors such as those related to pay policies and career development opportunities are mentioned elsewhere in this pamphlet. Among others that should be considered are the following:

- Attendance at conferences of professional societies.
- Giving credit lines or otherwise acknowledging contributors to publications of the laboratory.
- Freedom to publish, teach, or lecture outside of duty hours.
- Scheduling of vacation time. (One definite advantage of Federal employment is that normally vacations do not have to be taken only at certain seasons when an entire operation shuts down.)
- Flexibility in hours of work. (Agency heads have the discretion to authorize variations in the standard 40-hour week. Thus, staff members may work on a "first 40 hours" basis—for example, working late one evening on an experiment and coming in late the next day; or they may work a 40-hour week scheduled to allow them to attend classes during the normal workday when the training is not authorized under provisions of law.)

- Position titles adapted to the profession. (Official titles such as "Supervisory Physicist" are used for personnel and payroll purposes, but agency heads may authorize more professionally meaningful titles for publication on papers, correspondence, etc. Examples are "Member of Technical Staff," "Research Associate," or "Senior Scientist.")

Granted, the laboratory director, like all Federal managers, has to work within a framework of statutes, Commission regulations, and internal agency instructions. Nevertheless, there are real flexibilities built into the framework for personnel management, flexibilities that are not always fully known and less often fully utilized. This pamphlet is designed to help the science and engineering manager keep in mind the whole range of special resources available to him in the difficult task of developing a good laboratory environment.

U. S. GOVERNMENT PRINTING OFFICE : 1970 O - 404-479